

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 02/05907

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G01N21/77 G01N21/55 G01N33/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, COMPENDEX, INSPEC, PAJ, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 018, no. 384 (P-1772), 19 July 1994 (1994-07-19) & JP 06 109634 A (CENTRAL RES INST OF ELECTRIC POWER IND;OTHERS: 01), 22 April 1994 (1994-04-22) abstract	1-6, 11, 17-20, 32, 34
Y	abstract	13-15, 21, 22, 26-31, 33
Y	DE 196 30 181 A (INST PHYSIKALISCHE HOCHTECH EV) 29 January 1998 (1998-01-29) figure 4 claims 5-7 column 5, line 1 - line 17	26-31
A	column 3, line 54 - column 4, line 32 --- -/-	1, 12, 21, 23

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

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\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

\*Z\* document member of the same patent family

Date of the actual completion of the international search

10 Apr11 2003

Date of mailing of the international search report

23/04/2003

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## INTERNATIONAL SEARCH REPORT

 Int'l Application No  
 PCT/GB 02/05907

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>M.ANDERSEN ETAL: "Development of an optical monitoring system for flexible risers"            OFFSHORE TECHNOLOGY CONFERENCE, OTC 13201,            May 2001 (2001-05), pages 249-255,            XP008015969            Houston, Texas            abstract            page 249, right-hand column, last paragraph -page 250, left-hand column, paragraph 4            page 253, left-hand column, paragraph 1            figures 2,4</p>	33
A	<p>PENG Y T ET AL: "Characterization of hydrogen sensors based on palladium electroplated fiber Bragg gratings (FBG)"            SMART STRUCTURES AND MATERIALS 1999:            SENSORY PHENOMENA AND MEASUREMENT            INSTRUMENTATION FOR SMART STRUCTURES AND MATERIALS, NEWPORT BEACH, CA, USA, 1-4            MARCH 1999,            vol. 3670, pages 42-53, XP002237828            Proceedings of the SPIE - The International Society for Optical Engineering, 1999, SPIE-Int. Soc. Opt. Eng, USA            ISSN: 0277-786X            page 42, last paragraph</p>	1,26
Y	<p>US 5 337 376 A (RAVETTI ROBERT G ET AL)            9 August 1994 (1994-08-09)            column 4, line 58 -column 5, line 21            column 3, line 3 - line 55</p>	13-15, 21,22
X	<p>PATENT ABSTRACTS OF JAPAN            vol. 012, no. 224 (P-721),            25 June 1988 (1988-06-25)            &amp; JP 63 018309 A (FUJIKURA LTD),            26 January 1988 (1988-01-26)            abstract</p>	1,12
X	<p>PATENT ABSTRACTS OF JAPAN            vol. 010, no. 232 (P-486),            12 August 1986 (1986-08-12)            &amp; JP 61 066949 A (SUMITOMO ELECTRIC IND LTD), 5 April 1986 (1986-04-05)            abstract</p>	1
P,X	<p>PATENT ABSTRACTS OF JAPAN            vol. 2003, no. 01,            14 January 2003 (2003-01-14)            &amp; JP 2002 274897 A (FUJIKURA LTD),            25 September 2002 (2002-09-25)            abstract</p>	1-6,11, 17-20, 22,32,34
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>TABIB-AZAR M ET AL: "Highly sensitive hydrogen sensors using palladium coated fiber optics with exposed cores and evanescent field interactions" SENSORS AND ACTUATORS B, ELSEVIER SEQUOIA S.A., LAUSANNE, CH, vol. 56, no. 1-2, 1 July 1999 (1999-07-01), pages 158-163, XP004179632 ISSN: 0925-4005 the whole document</p> -----	1,13,15

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Information on patent family members

International Application No  
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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP 06109634	A	22-04-1994	NONE	
DE 19630181	A	29-01-1998	DE 19630181 A1	29-01-1998
US 5337376	A	09-08-1994	CA 2121152 A1	20-10-1994
			DE 69401677 D1	20-03-1997
			DE 69401677 T2	12-06-1997
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JP 61066949	A	05-04-1986	NONE	
JP 2002274897	A	25-09-2002	NONE	